

**REMARKS / ARGUMENTS**

The title has been amended in the manner suggested by the Examiner.

The claims have been amended in an effort to define the disclosed subject matter more clearly. Amended claim 6 is respectfully submitted to include all limitations of claim 4, which depended on claim 1 and was originally allowed by the Examiner.

Claims 5 and 6 are respectfully submitted neither to be clearly anticipated under 35 U.S.C. 102(b) by Hakala et al, cited, nor to be obvious therefrom.

Hakala et al disclose a convention frequency converter circuit for controlling a synchronous motor, as described in col. 2, lines 22-47. For braking, Hakala et al provide braking resistor 60, which has a non-linear voltage-current characteristic (col. 2, line 48, to col. 3, line 30). As pointed out in col. 2, lines 59-61, a resistor is used in which a rise in temperature increases its resistance in the operating range. For braking, switch 64 is used to short braking resistor 60 and diodes 52-57 to obtain a desired braking torque.

Nothing in the patent suggests a power converter connected to the armature windings and comprising a half-bridge for positive current half-waves and a half-bridge for negative current half-waves, the half-bridges being switchable by power breakers which short the armature windings, **wherein the power breakers are alternately controllable by a control device regulating the short-circuit current by a pulse-width modulation depending on the difference between a set value of the braking moment and an actual value of the short-circuit current.**

Thus, in a manner not suggested by the prior art, **both** half-bridges are actively controlled short-circuiting elements used for braking. The advantages of this arrangement have been outlined on pages 3 and 4 of the specification. The arrangement assures much better thermal conditions. The short-circuit current is regulated by a pulse-width modulation to obtain the desired braking moment. Nothing in the prior art suggests this.

Hakala et al short-circuits the motor windings over a common non-linear resistor and provides no further regulation of the individual short-circuit currents in the windings. In contrast to this, applicants' claimed apparatus does **not** require a braking resistor since braking is achieved by the

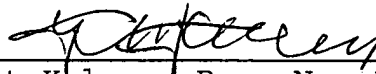
alternating short-circuiting of the armature windings by the power breakers of the half-bridges of the power converter. The provision of a braking resistor is **optional** in applicants' apparatus. While Hakala et al's brake control is effected by switching the braking resistor on or off, applicants provide a closed control circuit which enables the braking moment to be regulated within a wide range.

In view of the above, claims 5 and 6 are respectfully submitted clearly to be patentable.

A petition for a one-month extension is enclosed.

A sincere effort having been made to overcome all grounds of rejection, favorable reconsideration and allowance of claims 5 and 6 are respectfully solicited.

Respectfully submitted,  
JOSEF RAINER ET AL

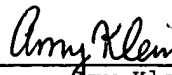


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Express: EM 145 117 470 US dated: Dec. 27, 2007

I hereby certify that this correspondence is being deposited with the United States Postal Service as express mail in an envelope addressed to: MAIL STOP RCE, COMMISSIONER FOR PATENTS, P.O. Box 1450, Alexandria, VA 22313-1450, on December 27, 2007.



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